



SEQUENCE LISTING

<110> Biologics Inc.
Webster, Mark
Reeves, Andrew R
Brikun, Igor A
Cernota, William H

<120> Process of Increasing Cellular Production of Biologically Active Compounds

<130> 1070.003

<140> US 10/637,159

<141> 2003-08-08

<160> 3

<170> PatentIn version 3.3

<210> 1

<211> 2124

<212> DNA

<213> Aeromicrobium erythreum

<400> 1

```
gcggtcgacg gcgccgagcc gtgggacgcc cccgagggca tcgcggtcaa gaacctctac      60
accgccgacg acctcgccga cgtcgacgcg ctcgacacct acccgggcct cgcgccgttc      120
ctgcgcggtc cctaccgggc catgtacacg acccagccgt ggacgatccg ccagtacgcc      180
gggttctcga ccgccgagga gtcgaacgcg ttctaccgcc gcaacctcgc cgccggccaa      240
aagggcctct cggtcgcctt cgacctcgcg acgcaccgcg gctacgactc cgaccaccgc      300
cgcggtgaagg gcgacgtcgg catggccggc gtcgcgatcg actcgatcta cgacgcccgc      360
cagctcttcg acggcatccc gctcgacgag atgagcgtct cgatgaccat gaacggcgcg      420
gtgctcccgg tgctcgcgct ctacatcgty gcggccgagg agcaggggggt gacgccggag      480
cagctctcgg ggaccatcca gaacgacatc ctcaaggagt tcatgggtccg caacacctac      540
atctaccgcg cggcgccgtc gatgcggatc atctccgaca tcttcgctga cacggcgggc      600
aagatgccgc ggttcaactc catctccatc tccgggtacc acatccaaga ggccggggcg      660
acgaacgacc tcgagctcgc ctacacgctc gccgacggtg tggagtacat ccgcgccggg      720
ctcgacgtcg gcctcgacat cgacgcgttc gcgcccgggc tcagcttctt ctgggccatc      780
ggcatgaact tctacatgga gatcgcgaag atgcgcgccg cccgtgccct gwggggcccg      840
ctcgtgcgcy acttcgacct gaagaacccc aagagcctca gcctgcgcac gcacagccag      900
acatcgggct ggagcctcac cgcgcaggac gtgttcaaca acgtccagcg cacctgcac      960
gaggcgatgg ccgccacgca gggccacacc cagagcctgc acacgaacgc gctcgacgag     1020
gcgatcgcyg tgccgacgga cttcagcgcy cggatcgccc gcaacacgca gctgctgctg     1080
cagcaggagt cgggcaccac cggcgtcatc gaccggtggg gcggctccta ctacgtcgag     1140
```

aagctgacgc acgacctcgc gaaccgcgcc tggg'gcgaca tccaggaggt cgagaaggcc	1200
ggcggcatgg ccaaggccat cgaggcgggc atccccaaga tgcgcgtcga ggaggcggcc	1260
gcccgcacgc aggcacgcat cgactccggc cagcaggccg tcatcggcgt caacacctac	1320
cgcctcgccg acgaggaccc gctcgacgtg ctcaaggctg acaacgcgtc ggtctacgcc	1380
cagcaggtgg cgaagctcga gcgactgcgc gccgagcgcg acccgcagga ggtcgagcgc	1440
gcgctcgacg ccctgacggc cagcgccgag cgtggcgcca gccgcgacgg ctcgctcgac	1500
ggcaacctgc tcgccctggc cgtcgacgcg gcccgcgcgga aggcgacggt cggcgagatc	1560
tcctacgcgc tcgagaaggt ctacgggcgc caccaggccg tcatccgtac gatctccggt	1620
gtgtaccgga ccgaggcggg ccagggcggc aacgtccaga aggtcatcga cgccaccgag	1680
gcgttcgaga aggccgaggg tcgacgcccg cgcctcctcg tggccaagat gggccaggac	1740
ggccacgacc gcggccagaa ggtcatcgtc acggcgttcg ccgacatggg cttcgacgtc	1800
gacgtcggac cgctgttttc cacgcccagag gaggtcgcgc agcaggccgt ggacgccgac	1860
gtgcacatcg tcggcgcttc gagcctcgcg gcggggccacc tgacgctcct gccggagctg	1920
aagaaggcgt tggccgagct cggcggcgag gacgtcatgg tcgtcatggg tggcgatc	1980
ccgcccgcgc acgtgccgac gctgaaggag atgggcgctg ccgagggtgt cctgcccggc	2040
acggtcatcg ccgactccgc gctcagcctg ctcgagcggt ccgcgcgagc ctgcagcact	2100
agatgggtcgg ttcgtccgag gtaa	2124

<210> 2
 <211> 3764
 <212> DNA
 <213> Aeromicrobium erythreum

<400> 2	
ctgtctctta tacacatctc aaccatcatc gatgaattcc accctgtgaa tgcgcaaacc	60
aacccttggc agaacatata catcgcgtcc gccatctcca gcagccgcac gcggcgcatc	120
tcgggcagcg ttgggtcctg gccacgggtg cgcgtgatcg tgctcctgtc gttgaggacc	180
cggctaggct ggcgggggtg cttactggt tagcagaatg aatcaccgat acgcgagcga	240
acgtgaagcg actgctgctg caaaacgtct gcgacctgag caacaacatg aatggctctt	300
ggtttccgtg tttcgtaaag tctggaaacg cggaagtcag cgccctgcac cattatgttc	360
cggatctatg tcgggtgcgg agaaagaggt aatgaaatgg cagatccctg gcttggtgtc	420
cacaaccgtt aaaccttaaa agctttaaaa gccttatata ttcttttttt tcttataaaa	480
cttaaaacct tagaggctat ttaagttgct gatttatatt aattttattg ttcaaacatg	540
agagcttagt acgtgaaaca tgagagctta gtacgttagc catgagagct tagtacgtta	600
gccatgaggg tttagttcgt taaacatgag agcttagtac gttaaacaatg agagcttagt	660
acgtgaaaca tgagagctta gtacgtacta tcaacagggt gaactgctga tcttcggatc	720

tatgtcgggt	gcggaagaa	aggtaatgaa	atggcatccg	gatctgcatc	gcaggatgct	780
gctggctacc	ctgtggaaca	cctacatctg	tattaacgaa	gcaattcgaa	ttcacagagg	840
cgcttatcgg	ttggccgcga	gattcctgtc	gatcctctcg	tgcagcgcga	ttccgagggg	900
aacggaaacg	ttgagagact	cggctctggct	catcatgggg	atggaaaccg	aggcggaaga	960
cgcctcctcg	aacaggtcgg	aaggcccacc	cttttcgctg	ccgaacagca	aggccagccg	1020
atccggattg	tccccgagtt	ccttcacgga	aatgtcgcca	tccgccttga	gcgtcatcag	1080
ctgcataccg	ctgtccccgaa	tgaaggcgat	ggcctcctcg	cgaccggaga	gaacgacggg	1140
aagggagaag	acgtaacctc	ggctggccct	ttggagacgc	cgggccgcga	tgctggtgat	1200
gtcactgtcg	accaggatga	tccccgacgc	tccgagcgcg	agcgacgtgc	gtactatcgc	1260
gccgatgttc	ccgacgatct	tcaccccgtc	gagaacgacg	acgtccccac	gccggctcgc	1320
gatatcgccg	aacctggccg	ggcgagggac	gcgggcgatg	ccgaatgtct	tggccttccg	1380
ctcccccttg	aacaactggg	tgacgatcga	ggagtcgatg	aggcggaccg	gtatgttctg	1440
ccgcccgcac	agatccagca	actcagatgg	aaaaggactg	ctgtcgctgc	cgtagacctc	1500
gatgaactcc	accccggccg	cgatgctgtg	catgaggggc	tcgacgtcct	cgatcaacgt	1560
tgtctttatg	ttggatcgcg	acggcttggg	gacatcgatg	atccgctgca	ccgcgggatc	1620
ggacggattt	gcgatgggtg	ccaactcagt	catggtcgtc	ctaccggctg	ctgtgttcag	1680
tgacgcgatt	cctgggggtg	gacaccctac	gcgacgatgg	cggatggctg	ccctgaccgg	1740
caatcaccaa	cgcaagggga	agtcgtcgct	ctctggcaaa	gctccccgct	cttccccgct	1800
cgggacccgc	gcggtcgatc	cccgcataatg	aagtattcgc	cttgatcaga	tcaggtaccc	1860
ggggatcatc	ttattaatca	gataaaatat	ttctagattt	cagtgcgaatt	tatctcttca	1920
aatgtagcac	ctgaagtcag	ccccatacga	tataagttgt	aattctcatg	tttgacagct	1980
tatcatcgat	aagctttaat	gcggtagttt	atcacagtta	aattgctaac	gcagtcaggc	2040
accgtgtatg	aaatctaaca	atgcgctcat	cgtcatcctc	ggcaccgtca	ccctggatgc	2100
tgtaggcata	ggcttgggta	tgccgggtact	gccgggcctc	ttgcgggata	tcgtccattc	2160
cgacagcatc	gccagtcact	atggcgtgct	gctagcgcta	tatgcgttga	tgcaatttct	2220
atgcgcaccc	gttctcggag	cactgtccga	ccgctttggc	cgccgcccag	tcctgtctgc	2280
ttcgctactt	ggagccacta	tcgactacgc	gatcatggcg	accacacccg	tcctgtggat	2340
cctctacgcc	ggacgcatcg	tggccggcat	caccggcgcc	acagggtgcg	ttgctggcgc	2400
ctatatcgcc	gacatcaccg	atggggaaga	tcgggctcgc	cacttcgggc	tcatgagcgc	2460
ttgtttcggc	gtgggtatgg	tggcaggccc	cgtggccggg	ggactgttgg	gcgccatctc	2520
cttgcattga	ccattccttg	cggcggcggt	gctcaacggc	ctcaacctac	tactgggctg	2580
cttcctaata	gaggagtcgc	ataagggaga	gcgtcgaccg	atgcccttga	gagccttcaa	2640

cccagtcagc	tccttccggt	gggcgcgggg	catgactatc	gtcgccgcac	ttatgactgt	2700
cttctttatc	atgcaactcg	taggacaggt	gccggcagcg	ctctgggtca	ttttcggcga	2760
ggaccgcttt	cgctggagcg	cgacgatgat	cggcctgtcg	cttgcggtat	tcggaatctt	2820
gcacgccctc	gctcaagcct	tcgtcactgg	tcccgccacc	aaacgtttcg	gcgagaagca	2880
ggccattatc	gccggcatgg	cggccgacgc	gctgggctac	gtcttgctgg	cgttcgcgac	2940
gcgaggctgg	atggccttcc	ccattatgat	tcttctcgct	tccggcgggca	tcgggatgcc	3000
cgcgttgtag	gccatgctgt	ccaggcaggt	agatgacgac	catcaggggac	agcttcaagg	3060
atcgctcgcg	gctcttacca	gcctaacttc	gatcattgga	ccgctgatcg	tcacggcgat	3120
ttatgccgcc	tcggcgagca	catggaacgg	gttggcatgg	attgtaggcg	ccgccctata	3180
ccttgtctgc	ctccccgct	tgcgtcgctg	tgcattggagc	cgggccacct	cgacctgaat	3240
ggaagccggc	ggcacctcgc	taacggattc	accactccaa	gaattggagc	caatcaattc	3300
ttgcggagaa	ctgtgaatgc	gcaaaccaac	ccttggcaga	acatatccat	cgcgtccgcc	3360
atctccagca	gcgcacgcgg	cgcattctcg	gcacgttggg	tcctggaatt	cgagctcggg	3420
accagcccga	cccagacacg	cggcggcacg	cctggtagat	gtcggaccgg	agttcgagggt	3480
acgcggcttg	caggtccagg	aaggggacgt	ccatgcgagt	gtccggttca	gtggcggctt	3540
gcgcccgatg	ctagtcgccg	ttgatcgggc	atcgcagggt	cacgcggctc	atcttgacgg	3600
ctggcgagag	gtgcgggagg	atctgaccga	cccggccac	acgtggcacc	gcgatgctgt	3660
tgtgggctgg	acaatcgtgc	cggttggtag	gatcctctag	agtcgacgca	tgcaagcttc	3720
tgcaggcatg	caagcttcag	ggttgagatg	tgtataagag	acag		3764

<210> 3
 <211> 615
 <212> DNA
 <213> Aeromicrobium erythreum

<400> 3						
atgccccagg	gccagccgct	ggtcgtcccc	gacgacggcc	tcaccacccg	ccagcgtcgc	60
aaccgtccgc	tcgtcatggt	ccacaccggg	cccggcaagg	ggaagtcgac	cgccgcgttc	120
ggcctcgcca	tgcgcgcctg	gaaccagggc	tggaaaggtcg	gcgtgttcca	gttcgtgaag	180
tccgccaaagt	ggcgcgtcgg	cgagcagagc	gtgctcgagc	acctggggccg	cctgcacgag	240
accgagggcc	tcggcggggc	cgtcgagtgg	cacaagatgg	gtcggggctg	gtcgtggtcg	300
cgcaagtcgg	gcaccgacga	cgaccacgcc	gtcgccgccg	ccgagggctg	ggccgagatc	360
aagcgtcgcc	tcgccaccga	gacgcacgac	ctctacgtgc	tcgacgagtt	cacctacccg	420
atgaagtggg	gctgggtcga	cgtcgacgac	gtcgccgaca	cgctcgcgtc	gcgccccggc	480
cgccagcacg	tggtgatcac	cggccgcgac	gccgcccccc	ggctcctgga	ggtcgccgac	540

ctcgtcaccg agatgacgaa ggtcaagcac cccatggacg tcggccagaa gggtcagcga 600
ggcatcgagt ggtga 615